

## LEXICAL CONCEPTUALIZATION OF *TIME* IN THE ONTOGENESIS OF BULGARIAN

Velka Popova

**ABSTRACT** – *The present article focuses on the lexical conceptualisation of TIME in the Bulgarian language acquisition. The empirical basis of the study includes data from a psycholinguistic experiment, observation of spontaneous speech and free verbal associations of Bulgarian preschool children. The analyzed data show the diffuse character of children's perception of time which is still amorphous and in this respect is quite distant from the intuitive model of a naïve adult native speaker.*

**KEYWORDS:** *Ontogenesis, TIME Category, Lexical Conceptualisation, Bulgarian Language*

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### Introduction

The focus of this paper is on the conceptual model of TIME extrapolated in children's lexicon. Its most important characteristic is the fact that it is not a static phenomenon but a dynamic and a changing one as in the age group observed (from 3 to 6 years) it is still in the process of establishment and development and language itself is its accessory. In this context the problems connected with the lexical conceptualization of time stand out as particularly interesting: on the one hand, they are a result of the cognitive immaturity, while on the other, of the linguistic attempts of the child to express the complex temporal relations in the concepts of „nursery“, i.e. children's naïve worldview.

In contemporary Bulgarian language the intuitive model of the category of time is included in a whole array of lexical units:

- *now...*,
- *today ...*,
- *yesterday ...*,
- *tomorrow ...*,
- *never ...*,
- *always ...*,
- *day ...*,
- *week ...*,
- *month ...*,
- *year ...*,
- *24-hours ...*,
- *night ...*,
- *morning ...*,

in which children are immersed since early childhood.

They constantly hear these lexemes used in the speech of adults but this does not mean that children could start using the lexemes right away. The first thing that is necessary for them is to achieve a specific cognitive capacity and a specific level of linguistic competence. This also confirms the fact that the acquisition of the lexical conceptualization of the category of TIME happens gradually throughout ontogenesis; therefore, at the end of pre-school age (around 6 years of age) the process is not fully completed [see Popova, 2000].

The present article focuses on the lexical means of conceptualisation of the category of *time* by Bulgarian pre-school children. The empirical data about this process are obtained through a specially designed psychological experiment with 90 children in the age range of 3 to 6 years old, and recordings of spontaneous speech produced by 5 Bulgarian children. In addition the study is based on the analysis of free verbal associations<sup>1</sup> of the words *morning* and *night* made by 100 5/6-year-old children, which sheds more light on the intuition-based model of the *time* category in Bulgarian pre-school children's language. The associations are based on a dictionary of associations compiled in an earlier experimental study carried out by the author of the present article (see *Dictionary of Associations* in [Popova, 2000: 106-117]).

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### 1. Lexical expression of TIME in spontaneous child's speech

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The most important characteristic of the intuitive model of the category of *time* in child's speech is that it is in the process of establishment and language itself takes part in it as its accessory. In this sense linguistic and cognitive development turn out to be interrelated. On the one hand, cognitive prerequisites are in the core of mastering a language, on the other, linguistic achievements outrun cognitive development predetermining the mastering of one or another metal category. Thus, having realized themselves as "subjects" with their own space, the 3 year-olds prove capable (both linguistically and cognitively) to undertake the role of an interpreter of a situation and this means that at the stage of semantic mapping of the situation children rely on a standard scheme already formed in the information base (frame, scenario) of the chain of events in which all slots are readily available (i.e. they potentially exist in the information base). At the same time by the end of pre-school age children are almost never wrong in the choice of a slot to be filled<sup>2</sup>, however, if it turns out that these slots are connected with notions such as "time", children frequently make inadequate linguistic choices.

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<sup>1</sup> The analysis of free word associations is carried out within the terms of the model **RLN** (the abbreviation is comprised of the initial letters of the family names of the authors of one of the most popular models of semantic networks - D. Rumelhart, P. Lindsay, D. Norman [Rumelhart et al, 1972]).

<sup>2</sup> A proof of that is the early mastering of WH-words by children - See [Stoyanova, 1992].

Generally, the ability to include linguistic elements of *time* in their speech develops slowly in children. This is the result not only of insufficient cognitive maturity but of linguistic factors related to the syntactic and semantic complexity of the respective structures. Thus, at the initiation of speech acts including generalizing-positive ALL-words and generalizing-negative NO-words, there is frequently a substitution of NO-words with ALL-words by children. This clearly shows that it is a matter of semantic ALL-generalization (i.e. generalization of the "universal" meaning), which disregards the relation of complementary distribution which these two groups of word (ALL- and NO-words) enter into in these specific structures. As a result the child "underestimates" and "ignores" the requirement for NO- and ALL-words to mutually exclude each other in the respective contexts:

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Toj igraeshe tam vsjakoga (vseki pat / vseki den / ... vinagi).  
He played there always (*every time / every day/ ... always*).  
(*"He always (every time / every day / ... always) played there."*)

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Toj ne igraeshe Nikoga tam.  
He not played NEVer there.  
(*"He NEVer played there."*)

But it is incorrect to say:

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Toj igraeshe nikoga tam.  
He played never there.  
"He never played there."

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Toj ne igraeshe VSJAKoga (vseki pat / vseki den / ... vinagi) tam.  
He not played always (*every time / every day/ ... always*) there.  
"He never played there."

**See examples:**

(1) TEF (3;0): *Tja **vinagi ne** si go maha.* (instead of: *Tja **nikoga ne** si go maha.*)

(*She **always doesn't** take it off.* (instead of: *She **never** takes it off.*)

(2) ALE (3;4-3;5): *Tja **vseki den ne** me obicha.* (instead of: *Tja **nikoga ne** me obicha.*)

(*She **doesn't love me every day.*** (instead of: *She **never** loves me*)

(3) ALE (3;9): *Mamo, **vinagi ne** si jala jabalki.* (instead of: *Mamo, **nikoga ne** si jala jabalki.*)

(*Mom, you **haven't always** eaten apples* (instead of: *Mom you **have never eaten** apples*)

(4) ALE (3;10): *Mamo, **vinagi nishto ne** sam pravila na tebe.* (instead of: *Mamo, **nikoga nishto ne** sam ti pravila*)

(*Mom, I **haven't always done nothing** to you.* (instead of: *Mom, I **have never done anything** to you*)

Up until the end of pre-school age the concept of time remains diffuse and vague, still, it is formed quite early in time, even before the occurrence of the corresponding linguistic expressions. According to I. Georgov "For a child to be able to grasp an exhibition of the present, the child should be able to realize this exhibition as such that has not existed before. Thus, in order for the child to realize that the sun is shining and the candle burning, the child should at least be vaguely aware of the fact that the sun was not shining and the candle was not burning" [Georgov, 1906]. In their speech young children are initially restricted by the localizers *now* and *here*. At the same time though, they have a very vague, however existing, idea of time which does not acknowledge this restriction and which is a prerequisite for the early development of some linguistic expressions of temporal relations, even though they might not always be the most adequate ones. This diffusion in children's concept of time is frequently expressed in spontaneous speech:

(5) *We'll go to the basement tomorrow. (I. G.)<sup>1</sup>*

(6) *He was here tomorrow. (I. G.)*

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<sup>1</sup> The initials I.G. following some of the examples in brackets stand for Ivan Georgov.

- (7) *Because tomorrow we will also close down, because Teddy Bear's birthday finished tomorrow.*
- (8) *We went for a visit tomorrow.*
- (9) *She is still big, and you are already little.*
- (10) *Mom, when you become little ...*
- (11) *Mom, could I sleep backwards, to fall asleep in the morning and wake up yesterday evening?*
- (12) *Night means black and day is white.*
- (13) *The Sun is already asleep (meaning 'It's evening/ it's dark')*
- (14) *There was an URGENTLY sick person.*
- (15) *When are we going to have breakfast (instead of: dinner)?*
- (16) *The cloud is crying on purpose so that it could rain.*

Expressions used by children are indicative of the fact that people at the dawn of their lives try to “see” **time** in its multidimensionality and complexity. The time markers used in the examples so far show yet another stage of the process of conceptualization of the universal category of “time”. It could be stated that children’s speech in general abounds in similar linguistic units. Their semantic features include the intuitive model of the mental category in question, which is characteristic of children’s naïve view of the world.

Anyone who has had the chance to be in contact with children from the analyzed age group could give such examples of expressions of “reversed time perspective”<sup>1</sup> which only confirms the fact that the observed phenomenon is not an accidental but a natural one. Taking into consideration the observations made as well as some other studies ([Stoyanova, 2006]; [Popova, 2006]), it can be concluded that after the occurrence of the first temporal oppositions within the system of verbs, it is adverbial expressions that become more frequently used, and the ones adequately used are only those which can be associated with any specific moment. There are single adverbs used to localize the activity in terms of the moment of speech but as could be seen from examples (5), (6), (7), and (8), the rules of agreement are frequently broken initially. The sporadic nature of these uses is relative as in a

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<sup>1</sup> The term is used by R. O. Jakobson [Jakobson, 1985].

specific moment in time the speech of almost all children features examples expressing reverse time perspective which implies the fact that it is a matter of a mandatory, and probably necessary, step in clarifying the concepts of time and the respective acquisition of the necessary linguistic devices. The expressions using reverse time perspective prove that children do not simply imitate but rather use the creative power of language in order to break the vague idea and "illusion" of time, so that they can establish some temporal order, understand and express in words this "illusory" definiteness characteristic of adult speech.

Usually having realized their helplessness in applying the objective time criteria, children resort to various language "experiments" in order to attempt to express and understand them:

- Children either avoid using the adverbial time expressions or locate the action through another (simultaneous, prospective or retrospective) action. As could be seen from examples (5), (6), (7), and (8), their occurrence in speech at an earlier stage is also possible; however, it is without actual pragmatic coverage. In the process of achieving the lexical conceptualization of the category of time there were noted some interesting cases of overgeneralization of some adverbs (for example the usage of *yesterday* meaning 'any past activity', of *next day* meaning 'any subsequent activity', and in one of the observed children – of *next year* meaning 'any subsequent activity').
- Children associate the concept of time with some well-known and emotionally attractive events, such as Christmas, birthdays, etc., with the typical paraphernalia and characters associated with them, as well as with some stereotypical everyday situations associated with children's daily rhythm (e.g. eating, sleeping, etc.) which can be illustrated by the following examples:

**Dialogue I: Stefka - STE (5;0) and mother - MAM**

BG	EN
STE: Kato mine denja e vecherta. Jadem pārvo prez denja, posle prez noshta, a tuj po sredata kakvo beshe, mamo?	STE: When the day is over, it is evening. We eat first at day time, then in the evening, and what was that in the middle of the day called, mom?
MAM: Obed.	MAM: Noon.
STE: A da, na obed.	STE: Yeah, right. At noon.

## Dialogue II: Pavel - PAV(4;04.14) and mother Maria – MAR

BG	EN
*MAR: Kakvo vi kazaha v detskata gradina?	*MAR: What did they tell you in kindergarten?
*PAV: Ami <b>sled edna godina</b> ste dodi[:doide] <b>Djado Koleda.</b>	*PAV: Well, <b>Santa Claus</b> will com [:come] in a <b>year.</b>
*MAR: Kak sled edna godina?	*MAR: What do you mean in a year?
*MAR: Sled edin mesec.	*MAR: In a month.
% sit: MAR demonstrira nedoumenie.	% sit: MAR is obviously puzzled.
*PAV: Az chuh sled edna godina.	*PAV: I heard 'in a year'.
*MAR: Edna godina e dvanadeset meseca.	*MAR: A year is 12 months long!
*MAR: Znaesh li kolko e dälgo!	*MAR: Do you know how long that is!
% sit: MAR se opitva da podchertae idejata za goljama prodälzhitelnost.	% sit: MAR is trying to stress on the idea of very long time.
*PAV: Ooo <b>chak togava</b> li shi dodi [:ste dojde]?	*PAV: Oooh, is he going to com [:come] <b>only then?</b>
*MAR: Ne, <b>sled edin mesec</b> shte doide.	*MAR: No, he will come <b>in a month.</b>
*PAV: <b>Kogato se naspim li?</b>	*PAV: <b>When we wake up?</b>
*MAR: Ne.	*MAR: No.
*PAV: Koga?	*PAV: When?
*MAR: <b>Sled kato se naspim okolo 40 pyti.</b>	*MAR: <b>After we wake up about 40 times.</b>
*PAV: Neee, tova e mnogo, <b>oshte po-poveche!</b>	*PAV: Nooooo, that's a lot, <b>much momore</b> [:a lot more]!
*MAR: Hah, oshte po-poveche.	*MAR: Ha, much momore.
%sit: MAR ironizira brat si, kato povtarja negovija nepravilen izraz.	%sit: MAR ironically imitates his brother's wrong expression.

- In children's consciousness the events with clear qualitative characteristics and clear-cut boundaries (with easily perceptible beginning and end) are the ones most clearly located in terms of time. Thus notions of smaller intervals of time, which are based on one's own experience, are more easily distinguished than notions of longer intervals which are quite inaccurate (dialogue II is quite exemplary in that respect). In such cases children feeling incapable of measuring time in the terms of objective parameters, resort to the earliest models of time fragmentation, e.g. the model from sleeping to sleeping.
- A more objective idea of time, which has to do with the idea of the cyclical nature of natural processes, is formed relatively late and it does not happen all of a sudden but gradually. In this respect it is interesting to observe the process of realization of the fragmentation of day and night into units which are separate and precisely located in time: day and night; morning, before lunch, noon, afternoon, evening. The naively-realistic character of children's consciousness when viewed in a dichotomous perspective, usually allows children to deduce the meaning of the words day and night from the opposition white/ light – black/ dark. This phenomenon prevails until a child becomes 6-7 years-old. For instance, a child who is 4 years and 11 months old explains the meaning of the words day and night in the following way: "Night means black and day is white". In the speech of the same child, the adverbs in the morning and in the evening are frequently used correctly to describe some stereotypical situations. At the same time, on some other (separate occasions) said adverbs are frequently substituted by day and night. This could be illustrated by the following examples:

**Dialogue III: mother - MAM and Stefka - STE (4,11)**

<b>BG</b>	<b>EN</b>
MAM: Koga imahme gosti?	MAM: When did you have guests?
STE: Prez noshta.	STE: At night.
MAM: Prez noshta ili vecherta?	MAM: At night or in the evening?
STE: Prez noshta, be.	STE: I said at night.
MAM: Kak pozna, che e nosht?	MAM: How did you know that it was night?
STE: Ami, navän beshe mnogo cherno.	STE: Well, it was very black outside.



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**Dialogue IV: mother (MAM) – same child (STE) age: 5 years and 1 month**

<b>BG</b>	<b>EN</b>
MAM: Koga si udari bradichkata?	MAM: When did you hit your chin?
STE: Prez noshta na stälbata.	STE: At night on the staircase.
MAM: Koga?	MAM: When?
MAM: Prez noshta?!	MAM: At night?!
STE: Prez noshta.	STE: At night.

These examples show how in the process of acquisition of time concepts which are more difficult cognitively (e.g. **morning** and **evening**) the child attempts to understand them through the prototypical notions of **day** and **night** which are actually associated with the events which are localized chronologically first in terms of objective time.

The examples presented and analyzed so far are used as an illustration of the diffuse character of children's perception of time which is still too amorphous and in this respect is quite distant from the intuitive model of a naïve adult native speaker. It is a fact, however, that in the spontaneous speech of children from the analysed age group there has been registered frequent and totally correct use of linguistic markers of time which completely correspond to the respective means in the target language. Is it then possible that the deviations commented on above are random and not so significant? The next part of the analysis strives to answer this question by subjecting the results from the experiment to a kind of experimental approbation.

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## **2. The experimental approach on time categorisation in the Bulgarian child's lexicon**

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### **2.1. The temporal opposition MORNING – EVENING in the experimental data from 100 Bulgarian pre-school children**

An experimental study was conducted among 90 Bulgarian children (monolingual) at the age of 3 to 6. The subjects were divided into three groups (first group – 30 children at the age of 3-4; second group – 30 children at the age of 4-5; and third group – 30 children at the age of 5-6). The experiment was conducted as an improvised interview with each child separately and the interview was recorded on a voice recorder. Children were asked to provide a definition for the terms «*morning*» and «*evening*» and to try to localize specific activities within the specific periods of time:

**Questions:**

- *When do you leave for kindergarten?*
- *What is morning?*
- *When do you watch "Sancho" (a traditional TV show which children watch in the evening before they go to sleep)?*
- *What is evening?*

Discussing the results from this **psycholinguistic experiment** has helped outline the main characteristics of the process of gradual acquisition of the category of time in the pre-school period. The data clearly show that indirect localization of an activity in time is observed until the end of the analysed age when it is gradually reduced and is substituted with time expressions and adverbs which are new for children, see **Chart 1**:

As could be seen from **Chart 1** the process of acquisition of linguistic devices to conceptualize time happens gradually. In time the temporal markers used by children start to look similar to the normative devices used in the speech of adults. There is something which should be added to this. The unexpected and unusual devices, such as cognitive metaphors for example, which children use, do not deviate children from their goals (see examples (13) and (16)). On the contrary, they are characteristic of adults' linguistic view of the world in which *time* could *teche* ('flow'), *vārvi* ('walk'), *bjaga* ('run'), *lekuva* ('heal'); *the sun* could *izgrjava* ('rise'), *zaljazva* ('set'), etc.

**2.2. MORNING and NIGHT in the child' s word associations**

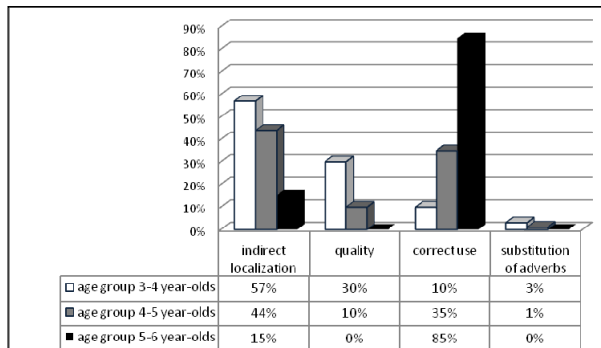
As has already been pointed out above, in order to acquire a higher degree of psychological adequacy and greater reliability of the conclusions drawn, data from a previous experiment on associations are also subjected to analysis. Thus, in the respective associative vocabulary, the attention is directed to the words-stimuli MORNING and NIGHT and the reactions mark the fragment from the conceptualization of time which is connected with the localization of the activity along the time axis. The results from the analysis of associative reactions (see **Chart 2**) show that the presentation of the category through a generic bond is similar in both cases (i.e. MORNING – 21%, NIGHT – 25%) as well as with the reactions of adult native speakers (i.e. using the stimulus NIGHT – 17% according to BNWA<sup>1</sup> [Gerganov, 1984]).

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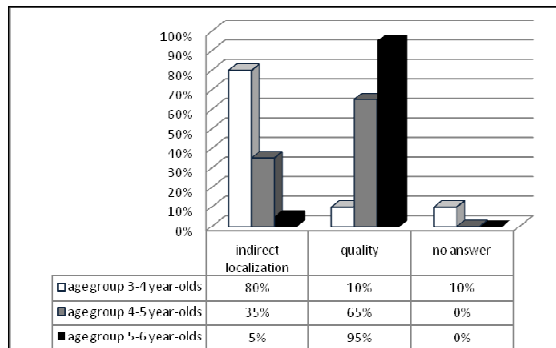
<sup>1</sup> BNWA - Bulgarian norms of word associations [Gerganov, 1984]

**MORNING**

1. Answers to the question:  
*When do you leave for kindergarten?*

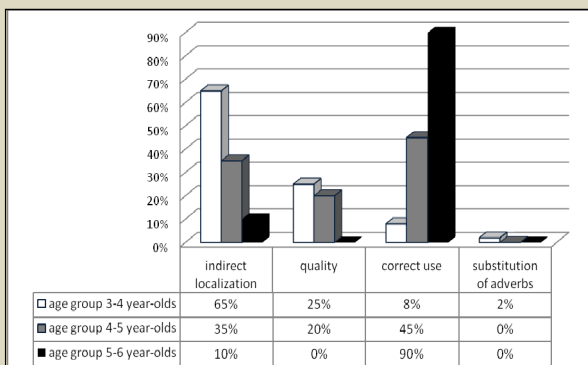


2. Answers to the question:  
*What is morning?*



**EVENING**

1. Answers to the question:  
*When do you watch "Sancho"?*



2. Answers to the question:  
*What is evening?*

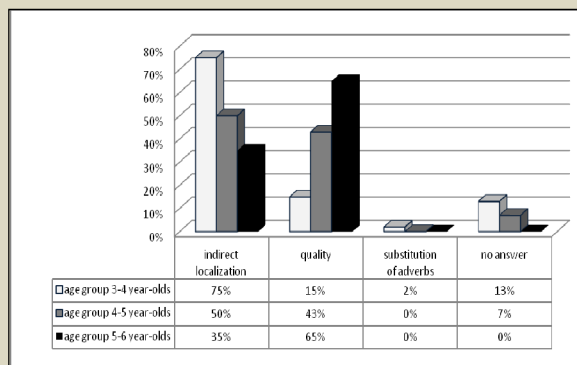


Chart 1: The temporal fragments *MORNING* and *EVENING* in children's linguistic view of the world

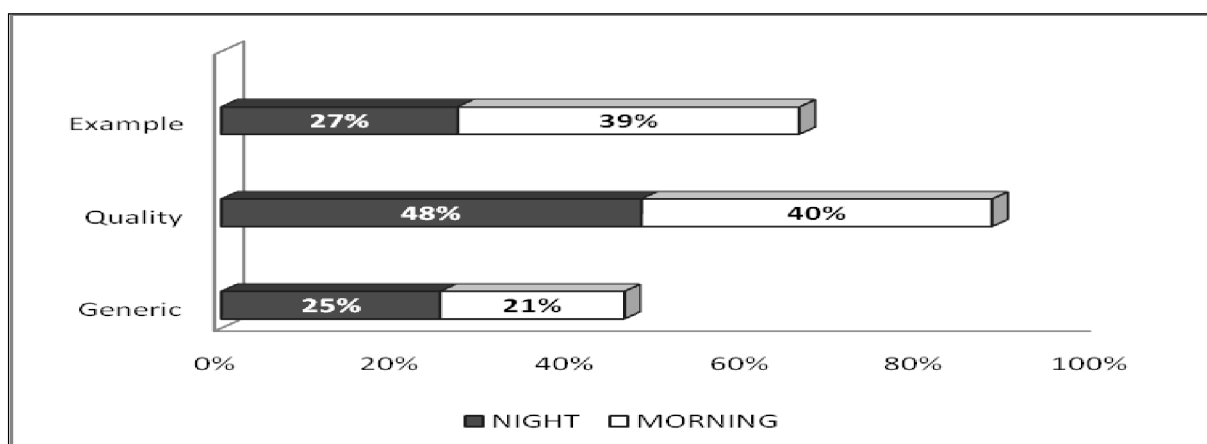


Chart 2: *MORNING* and *NIGHT* in the word associations of 100 Bulgarian children

At the same time, however, the semantic component "a separate fragment of the day and night" with the meaning of MORNING and NIGHT is presented through a high relative share in the relation EXAMPLE (in the case of MORNING – 39%, in the case of NIGHT – 27%) which has to do with the indirect location of the activity along the time axis. The percentage of associations which proves to be statistically significant with adults in analogous case (using the stimulus NIGHT by BNWA [Gerganov, 1984]) is the one in which the relation QUALITY (i.e. 50%) is being activated. These data presuppose that children at the end of their pre-school period already have at their disposal the category of TIME in the semantic mapping of a situation. At the same time, however, the lexical conceptualization of the category of TIME is not fully completed.

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## Conclusion

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This paper marks an attempt at grasping and commenting on some of the governing regularities and features of the process of acquisition of the time component of children's naïve view of the world. This is a very difficult task for a scholar because on the one hand, this process includes both the individual experience and language knowledge, knowledge about the world, knowledge about the cultural environment, while on the other, children at the dawn of their life are extremely restricted by the microscopic life and linguistic experience they have. It is self-understood that spontaneous speech as a source of information on the deep processes in the acquisition of such an intricate and complex category as TIME could not be self-sufficient. In this respect, using data from a psycho-linguistic experiment as well as associative data created the optimum environment for the specificity of the time component of the child's view of the world to be defined. Thus the analysis on the associative links allowed us to define the content not only from the surface level of the time lexicon but to develop an idea of the character of the content structure of the inner time lexicon. In the course of processing the data from the experiments and the observations made, the following regularities, characteristic of the speech of children have been observed:

- Lexical devices used for the conceptualization of time are acquired gradually. It is noticed that in time the semantic features of the time markers used by children get complicated and at the end of pre-school age they do not differ significantly from the linguistic devices used by adult native speakers. At the same time, the multidimensional and complex nature of the phenomenon of TIME and its corresponding linguistic exponents remains to a degree outside the scope of the abilities of children from the analysed age groups.
- The ability to include time expressions in their speech develops slowly in children. This is governed by factors such as the syntactic and semantic complexity of the respective structures as well as by the insufficient cognitive maturity of children.

- Based on the available data we could assume that in adult native speakers the emotional-sensitive and the rational level are to a degree balanced while in children in pre-school age it seems that the former dominates over the latter.

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## Information about author

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**Velka Popova** – Laboratory of Applied Linguistics, Faculty of Humanities, Konstantin Preslavsky University of Shumen, Bulgaria

**Major Fields of Scientific Research:** Cognitive Linguistics, Psycholinguistics, Language Acquisition, Corpus Linguistics.

e-mail: [popovavelka@gmail.com](mailto:popovavelka@gmail.com)